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(FILE 'HOME' ENTERED AT 19:31:40 ON 23 OCT 2006)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH, LIFESCI' ENTERED AT 19:32:00 ON 23 OCT 2006

L1 0 S ALPHA2/DELTA1
 L2 211 S ALPHA-2(W)DELTA-1
 L3 214765 S TRANSGEN?(6A) (ANIMAL OR MAMMAL OR MOUSE OR MICE OR RAT ORRABB
 L4 5 S L2 AND L3
 L5 5 DUP REM L4 (0 DUPLICATES REMOVED)

=> d au ti so pi ab 1-5 l5

L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

IN Luo, Zhigang David

TI Use of a transgenic mouse overexpressing .

alpha.2.delta.1 subunit of
 voltage-gated calcium channel as a model for nociception, pain
 transduction, and screening for analgesic compounds

SO PCT Int. Appl., 42 pp.

CODEN: PIXXD2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006017293	A2	20060216	WO 2005-US24697	20050712
WO 2006017293	A3	20060629		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
 NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
 SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
 ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM

AB The alpha-2-delta-1 subunit of a
 voltage-gated calcium channel (Cav.alpha.2.
 delta.1) is preferentially over-expressed in a non-human
 transgenic mouse model for neuropathic pain. Such
 transgenic animals advantageously exhibit non-injurious
 tactile allodynia and/or thermal hyperalgesia while retaining normal pain
 reaction to tissue injury and inflammatory pain. Thus, and in significant
 contrast to heretofore known animal models for neuropathic pain that
 require injury to precipitate the neuropathic pain, response behavior of the
 animal to a stimulus can be clearly attributed to the over-expression of
 the Cav.alpha.2.delta.1 subunit.
 The data presented strongly support that elevated Cav.alpha.
 2.delta.1 subunit is a mol. determinant of
 certain types of neuropathic pain. The results of the present study
 suggest that blocking pathways related to Cav.alpha.2.
 delta.1 subunit induction post peripheral nerve injury
 or the effects of elevated Cav.alpha.2.delta
 .1 subunit on VGCC may enable the development of compds. that
 act on both peripheral and central VGCC specifically involved in
 neuropathic pain expression.

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

AU Li, Chun-Ying; Zhang, Xiu-Lin; Matthews, Elizabeth A.; Li, Kang-Wu; Kurwa,
 Ambereen; Boroujerdi, Amin; Gross, Jimmy; Gold, Michael S.; Dickenson,
 Anthony H.; Feng, Guoping; Luo, Z. David

TI Calcium channel .alpha.2.delta.1 subunit mediates spinal hyperexcitability in pain modulation
 SO Pain (2006), 125(1-2), 20-34
 CODEN: PAINDB; ISSN: 0304-3959
 AB Mechanisms of chronic pain, including neuropathic pain, are poorly understood. Upregulation of voltage-gated calcium channel (VGCC) .alpha.2.delta.1 subunit (Cav.alpha.2.delta.1) in sensory neurons and dorsal spinal cord by peripheral nerve injury has been suggested to contribute to neuropathic pain. To investigate the mechanisms without the influence of other injury factors, we have created transgenic mice that constitutively overexpress Cav.alpha.2.delta.1 in neuronal tissues. Cav.alpha.2.delta.1 overexpression resulted in enhanced currents, altered kinetics and voltage-dependence of VGCC activation in sensory neurons; exaggerated and prolonged dorsal horn neuronal responses to mech. and thermal stimulations at the periphery; and pain behaviors. However, the transgenic mice showed normal dorsal horn neuronal responses to windup stimulation, and behavioral responses to tissue-injury/inflammatory stimuli. The pain behaviors in the transgenic mice had a pharmacol. profile suggesting a selective contribution of elevated Cav.alpha.2.delta.1 to the abnormal sensations, at least at the spinal cord level. In addition, gabapentin blocked VGCC currents concentration-dependently in transgenic, but not wild-type, sensory neurons. Thus, elevated neuronal Cav.alpha.2.delta.1 contributes to specific pain states through a mechanism mediated at least partially by enhanced VGCC activity in sensory neurons and hyperexcitability in dorsal horn neurons in response to peripheral stimulation. Modulation of enhanced VGCC activity by gabapentin may underlie at least partially its antihyperalgesic actions.

L5 ANSWER 3 OF 5 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
 AU Li, Chun-Ying [Reprint Author]; Li, Kang-Wu; Kurwa, Ambereen; Feng, Guoping; Luo, Z. David
 TI Characterization of injury free transgenic mouse showing neuropathic pain like behaviors.
 SO FASEB Journal, (MAR 7 2005) Vol. 19, No. 5, Suppl. S, Part 2, pp. A1071. Meeting Info.: Experimental Biology 2005 Meeting/35th International Congress of Physiological Sciences. San Diego, CA, USA. March 31 -April 06, 2005. Amer Assoc Anatomists; Amer Assoc Immunologists; Amer Physiol Soc; Amer Soc Biochem & Mol Biol; Amer Soc Investigat Pathol; Amer Soc Nutr Sci; Amer Soc Pharmacol & Expt Therapeut; Int Union Physiol Sci. CODEN: FAJOEC. ISSN: 0892-6638.
 AB Mechanisms underlying neuropathic pain are not clear. Previous studies have suggested that increased voltage-gated calcium-channel alpha(2)delta(1) (Ca(v)alpha(2)delta(1)) subunit in spinalcord and dorsal root ganglia (DRG) may contribute to neuropathic pain development/maintenance. To determine the causal role of Ca(v)alpha(2)delta(1) in neuropathic pain without complications from other injury factors, we generated and characterized transgenic mice overexpressing the Ca(v)alpha(2)delta(1) in neuronal tissues. Immunoblots showed elevated Ca(v)alpha(2)delta(1) expression in forebrain, hippocampus, cortex, cerebellum, spinal cord and DRG, but not in non-neuronal tissues. Compared with wild-type littermates, the transgenic mice showed reduced paw withdrawal threshold to mechanical stimulation and shortened paw withdrawal latencies to thermal stimulation, similar to neuropathic pain behaviors in nerve injured animals and patients. The hypersensitivity was reversed completely in a dose-related manner by gabapentin, an antihyperalgesic drug that binds to the Ca(v)alpha(2)delta(1), and partially by morphine. Ketorolac (COX

inhibitor) and ondansetron (5HT3 receptor antagonist) did not show any effect. These data support that increased $Ca(v)\alpha(2)\delta(1)$ contributes to the development and maintenance of neuropathic pain like behaviors and this transgenic mouse can serve as a model for studying mechanisms of abnormal sensation and screening new antihyperalgesic agents.

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IN Baron, Scott Phillip; Hidayetoglu, Debra Lynn; Johns, Margaret Ann; Offord, James David; Su, Ti-zhi

TI Non-human mammals and animal cells carrying mutations in the $\alpha(2)\delta(1)$ voltage-sensitive calcium channel genes

SO PCT Int. Appl., 124 pp.

CODEN: PIXXD2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004089072	A2	20041021	WO 2004-IB1187	20040405
	WO 2004089072	A3	20041216		
	WO 2004089072	C1	20050217		
	WO 2004089072	C2	20051215		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1615493	A2	20060118	EP 2004-725751	20040405
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	US 2005044581	A1	20050224	US 2004-823447	20040413
	US 2005144659	A1	20050630	US 2004-823432	20040413

AB Transgenic animals carrying mutations in the genes for $\alpha(1)$ subunit of the voltage-gated calcium channel in combination with mutations in the gene for the $\delta(1)$ subunit are described. These animals carry mutations that abolish the binding of gabapentin and animals carrying them can be used to study the biol. role of voltage-gated calcium channels and in the development of novel drugs. Homozygous mutations in the $\alpha(2)\delta(2)$ subunit gene are lethal in mice. Mutations in the $\delta(1)$ locus led to altered response to pregabalin and in pain perception.

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
IN Baron, Scott Phillip; Hidayetoglu, Debra Lynn; Offord, James David; Su, Ti-zhi

TI Non-human mammals and animal cells carrying mutations in the $\alpha(2)\delta(2)$ voltage-sensitive calcium channel genes

SO PCT Int. Appl., 176 pp.

CODEN: PIXXD2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004089071	A1	20041021	WO 2004-IB1110	20040412
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,				

BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
TD, TG

EP 1615494	A1	20060118	EP 2004-726877	20040412
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2006522599	T2	20061005	JP 2006-506459	20040412
US 2005044581	A1	20050224	US 2004-823447	20040413
US 2005144659	A1	20050630	US 2004-823432	20040413

AB The invention relates features non-human mammals and animal cells that contain a targeted disruption of an α .2/.
 δ 1 and /or an α 2/ δ 2 gene.

Transgenic animals carrying mutations in the genes for α 1 subunit of the voltage-gated calcium channel in combination with mutations in the genes for the δ 1 or δ 2 subunits are described. These animals carry mutations that abolish the binding of gabapentin and animals carrying them can be used to study the biol. role of voltage-gated calcium channels and in the development of novel drugs. Homozygous mutations in the α 2/ δ 2 subunit gene are lethal in mice. Mutations in the δ 1 locus led to altered response to pregabalin and in pain perception.

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Refine Search

Search Results -

Terms	Documents
alpha- 2/delta-1	0

Database:

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US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

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L3

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DATE: Monday, October 23, 2006 [Purge Queries](#) [Printable Copy](#) [Create Case](#)

Set Name Query
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Hit Count Set Name
result set

DB=PGPB,USPT; PLUR=YES; OP=AND

<u>L3</u>	alpha-2/delta-1	0	<u>L3</u>
<u>L2</u>	alpha2/delta1	0	<u>L2</u>
<u>L1</u>	alpha-2 adj delta-1	0	<u>L1</u>

END OF SEARCH HISTORY